

Claims

What is claimed is:

1. In a residential environment having a plurality of
5 televisions locatable in at least two separate locations, a
method of distributing video signals from a residential gateway,
the method comprising:

receiving at least one channel select command from one of a
plurality of remote control devices associated with a respective
10 one of the plurality of televisions, wherein at least a first one
of the plurality of remote control devices is a wireless remote
control device that transmits the channel select command as a
wireless signal;

receiving a video signal from a telecommunications network
15 in response to the at least one channel select command;

constructing, from the video signal, at least one series of
video packets corresponding to the at least one channel select
command;

transporting the at least one series of video packets over a
20 video packet bus to a plurality of video decoders; and

decoding the at least one series of video packets to produce
at least one television signal, the decoding performed by at
least one of the plurality of video decoders.

25 2. The method of claim 1, further comprising:

receiving the wireless signal from the first one of the plurality of remote control devices at a remote antennae package connected to the first one of the plurality of televisions; and transmitting the wireless signal from the remote antennae package over media.

3. The method of claim 2, further comprising:

receiving the wireless signal from the media at a remote antennae module located in close proximity to the residential gateway;

demodulating the wireless signal and extracting the portion corresponding to the channel select command; and

transmitting the channel select command to the residential gateway.

4. The method of claim 3, wherein said receiving the wireless signal includes receiving an approximately 433 MHz wireless signal from the first one of the plurality of remote control devices at a remote antennae package connected to first one of the plurality of televisions.

5. The method of claim 4, wherein said demodulating the wireless signal includes demodulating the wireless signal and extracting therefrom the channel select command as an approximately 1 KHz signal.

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6. In a residential environment having a plurality of televisions locatable in at least two separate locations, a method of distributing video signals from a residential gateway, the method comprising:

receiving at least one channel select command from one of a plurality of remote control devices associated with a respective one of the plurality of televisions, wherein at least a first one of the plurality of remote control devices is an optical remote control device that transmits the channel select command directly to the residential gateway as an optical signal;

receiving a video signal from a telecommunications network in response to the received at least one channel select command;

constructing, from the video signal, at least one series of video packets corresponding to the at least one channel select command;

transporting the at least one series of video packets over a video packet bus to a plurality of video decoders; and

decoding the at least one series of video packets to produce at least one television signal, the decoding performed by at least one of the plurality of video decoders.

7. The method of claim 6, wherein the optical signal is received by an optical receiver which is an integral part of the residential gateway.

8. The method of claim 6, wherein at least a second one of the plurality of remote control devices is a wireless remote control device that transmits the channel select command as a wireless signal.

9. The method of claim 8, further comprising:
receiving the wireless signal from the second one of the plurality of remote control devices at a remote antennae package connected to the second one of the plurality of televisions; and
transmitting the wireless signal from the remote antennae package over media.

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10. The method of claim 9, further comprising:
receiving the wireless signal from the media at a remote antennae module located in close proximity to the residential gateway;
demodulating the wireless signal and extracting the portion corresponding to the channel select command; and
transmitting the channel select command to the residential gateway.

11. A residential gateway for distributing video signals to a plurality of televisions locatable within at least two separate

locations in a residential environment, said residential gateway comprising:

a plurality of remote control devices associated with a respective one of the plurality of televisions for transmitting
5 channel select commands, wherein at least a first one of the plurality of remote control devices is a wireless remote control device that transmits the channel select command as a wireless signal;

10 a network interface module for receiving signals including video signals from a telecommunications network, wherein the received video signals correspond to the channel select commands;

means for constructing at least one series of video packets from the received video signals; *a*

15 a plurality of video processors for decoding the at least one series of video packets to produce at least one television signal; and

a video packet bus for transporting the at least one series of video packets to said plurality of video processors.

20 12. The residential gateway of claim 11, further comprising a remote antennae package connected to the first one of the plurality of televisions associated with the first one of the plurality of remote control devices, the remote antennae package receiving the wireless signal and transmitting the wireless
25 ~~signal over media.~~

13. The residential gateway of claim 12, further comprising
a remote antennae module for receiving the wireless signal from
the remote antennae package, demodulating the wireless signal,
5 extracting the portion corresponding to the channel select
command, and transmitting the channel select command to the
residential gateway.

14. The residential gateway of claim 13, wherein the remote
10 antennae module is in close proximity to the residential gateway.

15. The residential gateway of claim 13, wherein the remote
antennae module is connected to the residential gateway.

16. The residential gateway of claim 13, wherein the remote
antennae module is an integral part of the residential gateway.

17. The residential gateway of claim 13, wherein the
wireless signal has a frequency of approximately 433 MHz.

18. The residential gateway of claim 13, wherein the
channel select command is extracted from the wireless signal as
an approximately 1 KHz signal.

19. A residential gateway for distributing video signals to a plurality of televisions locatable in at least two separate locations in a residential environment, the residential gateway comprising:

5 a plurality of remote control devices associated with a respective one of the plurality of televisions for transmitting channel select commands, wherein at least a first one of the plurality of remote control devices is an optical remote control device that transmits the channel select command directly to the residential gateway as an optical signal;

10 a network interface module for receiving video signals from a telecommunications network in response to the channel select commands;

means for constructing at least one series of video packets from the received video signals;

15 a plurality of video decoders for decoding the at least one series of video packets to produce at least one television signal; and

20 a video packet bus for transporting the at least one series of video packets to the plurality of video decoders.

20. The residential gateway of claim 19, further comprising an optical receiver for receiving the optical signal from the ~~optical remote control device.~~

21. The residential gateway of claim 19, wherein at least a second one of the plurality of remote control devices is a wireless remote control device that transmits the channel select command as a wireless signal/.

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22. The residential gateway of claim 21, further comprising a remote antennae package connected to the second one of the plurality of televisions associated with the second one of the plurality of remote control devices, the remote antennae package receiving the wireless signal and transmitting the wireless signal over media.

23. The residential gateway of claim 22, further comprising a remote antennae module for receiving the wireless signal from the remote antennae package, demodulating the wireless signal, extracting the portion corresponding to the channel select command, and transmitting the channel select command to the residential gateway.

24. A method for receiving and decoding signals from a telecommunications network at a residential gateway, and transmitting decoded signals from the residential gateway to a plurality of devices including multiple televisions, the method comprising:

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connecting the residential gateway to the telecommunications network and to each of the plurality of devices so that all communications between the devices and the telecommunications network must pass through the residential gateway, wherein a
5 first one of the multiple televisions can be directly coupled to and located in close proximity to the residential gateway;

selecting a television channel to view for at least one of the multiple televisions by programming an associated remote control device to transmit a channel select command, wherein each
10 of the multiple televisions have an associated remote control device, the remote control device associated with the first television transmits the channel select command to a receiver within the residential gateway; a

transmitting the at least one channel select command to the
15 telecommunications network;

receiving a video signal from the telecommunications network corresponding to the at least one channel select command;

converting the video signal into at least one series of video packets;

20 decoding the at least one series of video packets into at least one television signal, the decoding performed by at least one of a plurality of video decoders; and

transmitting the at least one television signal to the appropriate television.

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25. The method of claim 24, wherein the remote control device associated with the first television is an optical remote control device and the receiver within the residential gateway is an optical receiver.

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26. The method of claim 24, wherein said connecting the residential gateway includes connecting the residential gateway to the first television with an S-video cable.

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27. The method of claim 24, wherein said transmitting the at least one television signal includes transmitting the television signal associated with the first television to the first television as an S-video signal.

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28. The method of claim 24, wherein said selecting a television channel includes selecting a television channel for at least one of the other televisions by programming at least one associated wireless remote control device, the at least one associated remote control device transmitting the channel select command as a wireless signal.

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29. The method of claim 28, further comprising:
receiving the wireless signal from the at least one associated wireless remote control device at a remote antennae

package connected to at least one associated wireless
televisions; and

transmitting the wireless signal from the remote antennae
package over media.

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~~6~~ 20. The method of claim ~~20~~⁵, further comprising:

receiving the wireless signal from the media at a remote
antennae module located in close proximity to the residential
gateway;

10 demodulating the wireless signal and extracting the portion
corresponding to the channel select command; and

transmitting the channel select command to the residential
gateway.

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15 31. A residential gateway for receiving and decoding
signals from a telecommunications network and transmitting
decoded signals to a plurality of devices including multiple
televisions, the residential gateway comprising:

a network interface module for receiving the signals,
20 including video signals, from the telecommunications network;

means for converting the video signal into at least one
series of video packets;

a plurality of video decoders for decoding the at least one
series of video packets into at least one television signal
25 corresponding to at least one channel select command, and

transmitting the at least one television signal to the
corresponding television; and

a receiver for receiving channel select commands from a
first remote control device associated with a first one of the
5 multiple televisions that can be directly coupled to and in close
proximity to the residential gateway.

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32. The residential gateway of claim 31, wherein said
receiver is an optical receiver and the first remote control
10 device is an optical remote control device.

33. The residential gateway of claim 31, further comprising
a S-video connector for connecting the first television to the
residential gateway.

34. The residential gateway of claim 31, wherein said video
decoder associated with the first television decodes a series of
video streams associated with the first television into S-video
signals and transmits the S-video signals to the first
20 television.

35. The residential gateway of claim 31, further comprising
a remote control module for receiving and processing channel
~~select commands.~~

36. The residential gateway of claim 31, further comprising
a remote antennae package connected to a second television,
wherein said remote antennae package receives a channel select
command from an associated wireless remote control device as a
5 wireless signal and transmits the wireless signal over media.

8 37. The residential gateway of claim 36, further comprising
a remote antennae module for receiving the wireless signal from
the remote antennae package, demodulating the wireless signal,
10 and extracting the portion corresponding to the channel select
command.

38. A method for receiving and decoding signals from a
telecommunications network at a residential gateway, and
15 transmitting the decoded signals from the residential gateway to
a plurality of devices including multiple televisions, the method
comprising:

connecting the residential gateway to the telecommunications
network and to each of the plurality of devices that will
20 communicate with the telecommunications network through the
residential gateway;

selecting a television channel to view for at least one of
the multiple televisions by programming an associated remote
control device to transmit a channel select command, wherein at
25 least one of the remote control devices transmits the channel

select command directly to a receiver within the residential gateway;

transmitting the at least one channel select command to the telecommunications network;

5 receiving a video signal from the telecommunications network corresponding to the at least one channel select command;

decoding the video signal into at least one television signal, the decoding performed by at least one of a plurality of video decoders; and

10 transmitting the at least one television signal to the appropriate television.

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Suba 5/ 39. The method of claim 38, wherein the at least one remote control device is an infrared remote control device and the receiver is an infrared receiver.

40. The method of claim 38, wherein a subset of the multiple televisions are remotely located from the residential gateway and have an associated wireless remote control device.

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41. The method of claim 40, wherein the subset of televisions have a remote antennae package connected thereto and said selecting a television channel includes selecting a television channel for each of the remotely located televisions
25 by programming the associated wireless remote control device to

transmit a channel select command as a wireless signal to the remote antennae package, the remote antennae package transmitting the wireless signal containing the channel select command over media.

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~~42~~¹¹. The method of claim ~~41~~¹⁰, wherein said selecting a television channel further includes receiving the wireless signal from the media at a remote antennae module, the remote antennae module demodulates the wireless signal and extracts the portion
10 corresponding to the channel select command.

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43. A residential gateway for receiving and decoding signals from a telecommunications network and transmitting the decoded signals to a plurality of devices including multiple
15 televisions, the residential gateway comprising:

a network interface module for receiving the signals, including video signals, from the telecommunications network;

a plurality of video decoders ^afor decoding the video signals into at least one television signal corresponding to at least one
20 channel select command, and transmitting the at least one television signal to the corresponding television; and

a receiver for directly receiving channel select commands from at least one remote control device associated with one of
~~the multiple televisions.~~

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44. The residential gateway of claim 43, wherein the at least one remote control device is an optical remote control device and said receiver is an optical receiver.

45. The residential gateway of claim 43, wherein a subset of the multiple televisions are remotely located from the residential gateway and have an associated wireless remote control device.

46. The residential gateway of claim 45, further comprising a remote antennae package associated with each remotely located television, wherein the remote antennae package is connected to the remotely located television, the associated wireless remote control device transmits a channel select command as a wireless signal to the remote antennae package, and the remote antennae package transmits the wireless signal containing the channel select command over media.

47. The residential gateway of claim 46, further comprising a remote antennae module, wherein the wireless signal transmitted by each remote antennae package is received by the remote antennae module which demodulates the wireless signals and extracts the portion corresponding to the channel select ~~commands~~.

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A method for receiving and decoding signals from a telecommunications network at a residential gateway, and transmitting the decoded signals from the residential gateway to a plurality of devices including multiple televisions, the method

5 comprising:

connecting the residential gateway to the telecommunications network and to at least one television that is remotely located from the residential gateway;

10 selecting a television channel to view for the at least one television by programming an associated wireless remote control device, wherein the wireless remote control device transmits a channel select command as a wireless signal to a remote antennae package connected to the television, the remote antennae package receives the wireless signal and transmits the wireless signal
15 over a media to a remote antennae module which demodulates the wireless signal and extracts the portion corresponding to the channel select command;

transmitting the channel select command to the telecommunications network;

20 receiving a video signal from the telecommunications network corresponding to the channel select command;

decoding the video signal into a television signal, the decoding performed by one of multiple video decoders associated with the multiple televisions; and

transmitting the television signal to the at least one television.

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49. A residential gateway for receiving and decoding

5 signals from a telecommunications network and transmitting the decoded signals to a plurality of devices including multiple televisions, the residential gateway comprising:

a network interface module for transmitting upstream signals, including channel select commands, to the

10 telecommunications network and receiving downstream signals, including video signals, from the telecommunications network;

a plurality of video decoders for decoding the video signals into at least one television signal corresponding to at least one channel select command, and transmitting the at least one
15 television signal to the corresponding television;

a remote control module for processing the channel select commands, wherein at least one of the channel select commands is extracted from a wireless signal, the wireless signal being transmitted from a wireless remote control device to a remote
20 antennae package connected to the associated television, the remote antennae package transmitting the wireless signal over media to a remote antennae module which demodulates the wireless signal and extracts the portion corresponding to the channel select command.

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50. a residential gateway for receiving and decoding signals from a telecommunications network and transmitting the decoded signals to a plurality of devices including multiple televisions, the residential gateway comprising:

5 a network interface module for transmitting upstream signals, including channel select commands, to the telecommunications network and receiving downstream signals, including video signals, from the telecommunications network;

10 a plurality of video decoders for decoding the video signals into at least one television signal corresponding to at least one channel select command, and transmitting the at least one television signal to the corresponding television;

15 a remote antennae package located in close proximity to and connected to a remotely located television, said remote antennae package receiving a wireless signal, including a channel select command, from a wireless remote control device associated with the remotely located television and modulating the wireless signal over media; and

20 a remote antennae module connected to the media and the residential gateway, said remote antennae module demodulating the wireless signal, extracting the portion corresponding to the channel select command, and transmitting the channel select command to the residential gateway.